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ABSTRACT

Presented is research to support the orthomolecular rather than the psychodynamic approach to treating schizophrenia, psychoses, and allied disorders in children. The orthomolecular approach, also known as orthomolecular psychiatry, is reported to involve the administration of megavitamins (following a study to determine biochemical needs), appropriate diet, exercise, psychotherapy, and other drugs. Advantages of the orthomolecular approach are noted to include better treatment results; less expensive and time-consuming treatment; less guilt feelings and alienation of families; removal of much of the stigma and fear of the medical problem because of good prognosis; and more objective, accurate, and easily obtained diagnosis. (SB)

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ORTHOMOLECULAR APPROACH TO THE TREATMENT OF SCHIZOPHRENIA, CHILDHOOD PSYCHOSES, AND ALLIED DISORDERS SUCH AS: HYPERACTIVITY, AUTISM, HYPOGLYCEMIA, AND SUB CLINICAL PELLAGRA

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Orthomolecular Approach to the Treatment of Schizophrenia, Childhood Psychoses, and Allied Disorders Such As: Hyperactivity, Autism, Hypoglycemia, and Sub Clinical Pellagra

Children afflicted with childhood psychoses and allied disorders suffer markedly in formal learning. Their behavior disorders work against their natural tendency and capacity to learn. Furthermore, their behavior is often bizarre and marked by intense hyperactivity and ritualism. These children have extreme learning, emotional, and social adjustment problems.

Much research has been conducted to determine the causes and cures of these disorders from the psychological and physiological points of view. Two of the major premises developed are 1) the psychodynamic concept and 2) the orthomolecular approach. The psychodynamic concept is criticized as lacking in scientific proof.

Kahan (1973) stated that the psychodynamic or "tension" oriented approach is based upon the premise that childhood occurrences, or traumas, can bring about mental disorders in later life, including schizophrenia. Furthermore, tension, strain, and unresolved problems can result in pathological disorders. Included in the psychodynamic theory is the lack of communication, family-society pressures, and alienation as the cause of mental illness. Kahan continued to point out that although these theories do not have a single case for proof, yet they

are used as the basis for diagnosis and treatment by therapists throughout the western world.

According to many researchers, not only is there a lack of evidence to support the psychodynamic theory, but in reality it is a handicap in the field of psychiatry. Bindra (1959) stated that the available research suggests that the psychodynamic approach has turned out to be a "wrong lead." Cott (1970) strongly denounced the exclusive use of drugs or the psychodynamic approach to cure mental illness and other learning disabilities resulting from it.

Cott, who is a physician, advocated the orthomolecular treatment researched and founded by Abraham Hoffer and Humphry Osmond. He said,

> My associates and I have carried on research on the molecular basis of mental disease for 15 years. I am increasingly convinced that the provision of the optimum concentrations of substances normally present in the body, in addition to other therapeutic methods, is the best treatment presently available to schizophrenics. Because of their different genetic constitution, many schizophrenics may need an intake of vitamins not provided by a normal diet in order to achieve the optimum molecular environment for their minds.

The Orthomolecular Approach

What, then, is the orthomolecular approach in the treatment of schizophrenia, childhood psychoses, and allied disorders? In recent years, some in the school of psychiatry believe that human thought patterns, emotions, and actions are affected by the physical condition

of the body and that the nervous system cannot be expected to perform its many complicated functions without proper chemical balance (Ross, 1974).

Hilsheimer (1972) pointed out an interesting consideration in terms of biochemical imbalance and learning disability. He said,

> Only when the child has a normal internal environment can he learn, grow, and function; otherwise, the biochemical imbalance makes him unresponsive to practically all types of learning and leads him rapidly into worse behavioral problems. Full re-education is made incredibly difficult without correction of the biological dysfunction.

The orthomolecular approach involves the administration of mega-vitamins (massive doses of vitamin B_3--niacin—and vitamin C), appropriate diet, exercise, psychotherapy, and other types of drugs. Initially a thorough study is done to determine the biochemical needs, and proper doses of megavitamins are prescribed. This treatment is also known as orthomolecular psychiatry.

In the early 1950's, Abraham Hoffer and Humphry Osmond brought the orthomolecular treatment from theory to practice by giving niacin to schizophrenics in the Province of Saskatchewan, Canada. Sensory distortions and hallucinations characteristic of schizophrenia may be the result of a chemical known as adrenochrome. This is a naturally occurring chemical that is formed during the oxidation of adrenalin. Interestingly, during World War II, adrenalin was used in anesthesia. Adrenochrome, found in old, discolored supplies of adrenalin, proved to

cause hallucinations. Hoffer and Osmond took this chemical themselves and reported to have experienced distortions in thoughts, emotions, and perceptions similar to schizophrenic patients. They also theorized that large amounts of niacin could reduce the formation of adrenalin and adrenochrome. What appeared most striking was the fact that the first eight schizophrenic patients recovered completely through the orthomolecular treatment. These early results were reported as astounding. A follow-up study revealed that all eight patients remained well at the end of 15 years.

Two formal experiments were conducted by Hoffer and Osmond with more patients. They used electroconvulsive therapy and various other treatments available at that time, in addition to the niacin therapy. Interestingly enough, in both experiments, patients receiving niacin improved significantly with fewer relapses than patients who received other forms of treatment with no niacin (Ross, 1974).

Since the early 1950's, the orthomolecular treatment has been researched by others and used by many professionals. Cott (1969) maintained that in order for the mind to function properly, the brain requires molecules of many different substances. Mental illness, which is closely associated with physical disease, is the result of low concentrations in the brain of the following vitamins: Thiamine (B_1), Nicotinic Acid or Nicotinamide (B_3), Pyridoxine (B_6), Biotin (B_{12}), Ascorbic Acid and Folic Acid. Furthermore, there is sufficient evidence to believe that human behavior and general mental functions are affected by changes in the concentration in the brain of uric acid, gamma-aminobutyric acid,

and glutamic acid.

In the past, professionals as well as laymen received training which led them to believe that the everyday diet contains all the minerals and vitamins required for normal body functions. Granted, many people may not require supplementary doses of vitamins. However, ample evidence points to the fact that all people require supplemental doses of vitamin C. Cott (1969) stated, "A substantial body of scientific evidence has developed in recent years showing that mentally ill adults and children do, in fact, tend to have markedly atypical metabolism with regard to essential nutrilites (vitamins, essential amino-acids and essential fatty acids)."

During 1969-1970, Dr. Cott treated 250 children who were ill either with schizophrenia, autism, brain damage, or retardation. Many children were treated for learning disabilities. The vitamin treatment resulted in significant changes and, in most cases, this result was observed within two and a half month's time. It was Dr. Cott's experience to observe a definite pattern of improvement in children who were already responding to the treatment. Initially the child began to understand and obey commands, followed by cooperation with parents and other adults. Hyperactivity, which happens to be one of the major symptoms of childhood psychosis, subsided slowly. Those children who were non-verbal began to make vocal efforts. Children who were already verbal began to put forth effort to communicate through speech, using short phrases and sentences to express their wants and needs. In their general behavior,

these children showed greater appreciation for people about them. The progress appeared to be directly proportional to the length of treatment. Younger children between the ages of three and eight responded better than did older persons (Cott, 1969).

Currently, research investigation is continuing in the importance of diet in the creation of an optimum molecular environment for the brain. Dr. Vitale and Velez reported on the village of Heliconia, Colombia, population 5,000, where babies are born with normal intelligence, but by the time they become teenagers, a shocking 95% are mentally retarded. This condition is mainly due to improper diet. The doctors pointed out that essential amino-acids play a vital role in physical growth. The people of Heliconia used manioc, potatoes, and rice for a staple diet--all of which are foods high in carbohydrates. In addition, they ate panela, a syrup made from sugar cane. These people were not only intellectually stunted but were physically stunted as well. Their average height was five feet three inches. Twenty-four percent of the total population were dwarfs who grew no larger than the normal six-year-old (Cott, 1969).

Proper nutrition and its affect on human behavior is of concern to many professionals, perhaps more so in the field of psychiatry since the advent of orthomolecular treatment. Many psychiatric hospitals routinely check the patients' diets as a part of their psychiatric treatment. Hilsheimer (1972) stated:

> The first thing we do with a child is to see if certain foods, especially those containing refined carbohydrates, are contri-

buting to the problem. At that time they are also placed on large doses of vitamins, for practically every disturbed child is found to suffer a dietary deficiency, or food intolerance of some type. Megavitamins are administered in conjunction with a closely controlled diet containing few processed carbohydrates in order to restore body chemistry to normal and keep it there.

Practically all children sent to Dr. Hilsheimer were diagnosed as suffering from a deficiency of B vitamins. He pointed out, "Whole grains, undebilitated brown rice, eggs, milk and meat from properly fed animals are rapidly disappearing from the market." The result has been inadequate nutrition for the nervous system. Whenever hyperactivity and other behavior problems are observed in children, immediately these doctors inspect the child's diet for a lack of B vitamins and the child's metabolic ability to process the foods. Consider this, "A high intake of sweetened foods will cause a deficiency in the supply of the B-complex available to the body and the brain. The sugar habits of the child must also be assessed in the light of the B vitamin intake" (Hilsheimer, 1972).

Vitamin C deficiency is almost universal in children with special problems. For optimal functioning, human beings require a proper balance of foods from natural sources and as close to their natural state as possible.

Four main processes are summarized regarding nutrition:

1. Intake of correct foods in balanced and adequate amounts. Consideration must be given to age, sex, weight, and state of health. During infancy, childhood, pregnancy, and lactation, a relatively

larger amount of food is required for growth.

2. Digestion or breaking down of complex chemicals into simpler forms.

3. Assimilation or absorption from the gastro-intestinal tract.

4. Utilization or conversion by various biochemical processes to replace the constant breakdown of living tissue (Kowalson, 1970).

Dr. Kowalson further suggested that malnutrition may result from a deficiency in one or more of these processes. It may also result from a failure to compensate for increased requirements of various essential elements.

He said, "In this land of plenty, poverty and/or ignorance are probably the most prevalent causes of poor dietary intake" (Kowalson, 1970).

Carbohydrate overload may cause anorexia or lack of appetite for essential foods. It may be due to some other disturbances such as depression, lack of exercise, tension, or illness. Anorexia nervosa is an extreme form of this condition characterized by a pathological aversion to food, which may result in weight loss and multiple deficiencies, including those affecting the brain function. This sets up a vicious circle which becomes hard to correct and many such persons are classified as psychotic.

Another disease known as Pernicious Anemia, which used to be fatal, now can be treated. Besides other effects, Pernicious Anemia can cause nerve damage and psychoses. This disease is caused by a lack of hydrochloric acid and the so-called intrinsic factor on the stomach lining,

resulting in the inability of the body to assimilate B_{12}. This anti-Pernicious Anemia vitamin is found in rice polishings, meat, yeast, liver, eggs, and milk (Kowalson, 1970).

It was Dr. Kowalson who gave the old disease, schizophrenia, a new name called Sub Clinical Pellagra. This new name is more acceptable to parents than mental illness or schizophrenia. Green (1970) maintains that the main diagnostic criterion for the condition is its response to the administration of large doses of vitamin B_3 or niacin. He said,

> Sub Clinical Pellagra is a deficiency syndrome characterized by the presence of perceptual changes, affecting any or all of the five senses, associated with neurasthenia. It is due to deficiency of, or an increased demand for Niacin, the administration of which causes prompt disappearance of the symptom complex (Green, 1970).

The basic purpose of the megavitamin (or orthomolecular) treatment is to provide the body cells with the best possible environment. Kahan (1970) mentioned that there is evidence that schizophrenia is a vitamin dependency disease. A high dose of vitamins along with other chemotherapy, diet, and some useful treatment can be used to fight the disease.

Many published studies are available to show that this megavitamin therapy is beneficial in the treatment of schizophrenia. In 1973, over 50,000 patients were treated by hundreds of physicians using the orthomolecular treatment. These physicains reported 80% recovery rate in

adults and a higher rate of recovery in children. As far as side effects are concerned, their reports include a small number. These side effects can be easily corrected through changes in doses and the prescription of corrective medication.

A few studies report negative results. It was found, upon examination, that these studies did not follow the methods used in the original treatment. Perhaps some of the researchers, nurtured on Freudian and psychodynamic theories, could not conceive a medical approach and were unable to follow the orthomolecular methods, reports Kahan (1970).

In addition to the treatment of schizophrenia, the orthomolecular approach was found to be useful in treating other disorders such as alcoholism, rheumatism, low blood sugar, arthritis, and behavior and learning disabilities in children. The orthomolecular treatment is also helpful in heart diseases, arteriosclerosis, reducing high blood cholesterol, and alleviating aging problems.

Advantages of the Orthomolecular Approach

Kahan (1970) points out advantages to the orthomolecular approach.

1) Infinitely better treatment results.

2) Treatment is much less expensive and time-consuming.

3) Considered as a medical problem with a good prognosis in most cases, much of the stigma and fear associated with the disease is removed.

4) Because no one is blamed, there are less guilt feelings and less alienation of families.

5) Diagnosis is more objective, more accurate, and more easily obtained.

It is interesting to note, however, that the orthomolecular treatment is not accepted by the medical associations. Could it be that it is uninvolved and too inexpensive? Perhaps it is not sophisticated enough for such diseases as malvaria, senility, neurosis, hypoglycemia, and other related diseases.

Conclusion

Dr. Hoffer is thoroughly convinced that the next decade will prove him to be a prophet. He decided some 22 years ago that the mentally ill people of the world could not wait for decades of research and studies when there was, in his professional and scientific opinion, something that could help them. As early as 1952, he acknowledged that megadoses of vitamin B_3 and vitamin C would help alleviate this problem of mental illness in its various forms and stages. Hoffer (1972) stated that the resistance to the orthomolecular approach is fading away; within ten years he feels that this approach will become the standard treatment for mental illness. Within this period there will be enough definitive studies so that it will be impossible to ignore this procedure in the treatment of mental illness. Otherwise one will risk being sued for malpractice.

According to Ross (1974), the orthomolecular approach has become a full-fledged branch in the field of psychiatry. The professional organization for this branch of psychiatry is known as the Academy of Orthomolecular Psychiatry, which is now approximately five years old and has attracted over 200 professional members. The advocates of this

approach have treated over 20,000 patients.

Time will tell whether or not the orthomolecular approach will survive the attacks of its critics.

References

Bindra, D., M.D. The psychodynamic approach: a wrong lead. Canadian Journal of Psychology, 1959, 354-361.

Cott, A., M.D. A biochemical approach to schizophrenia. New York: American Schizophrenia Association, 1970.

Cott, A., M.D. Doctors speak on the orthomolecular approach. Regina, Saskatechewan: Canadian Schizophrenia Foundation, 1969.

Green, R. G., M.D. A child's dilemma: sub clinical pellagra (hidden disease). Regina, Saskatchewan: Candian Schizophrenia Foundation, 1969.

Hilsheimer, George, Ineffective nutrition--learning and behavior. Montreal: Society for Emotionally Disturbed Children, 1972.

Hoffer, A., M.D. How to live with schizophrenia. London: Morrison and Gibb, Ltd., 1972.

Hoffer, A., M.D. & Osmond, H., M.D. A comprehensive theory of schizophrenia. International Journal of Psychiatry. 1970, 2, (No. 4).

Kahan, I. J. In search of therapy--a program for public action. Regina, Saskatchewan: Canadian Schizophrenia Foundation, 1973.

Kowalson, B., M.D. Doctors speak on the orthomolecular approach. Regina, Saskatchewan: Canadian Schizophrenia Foundation, 1970.

Ross, H. M., M.D. Orthomolecular psychiatry: vitamin pills for schizophrenics. Psychology Today, April 1974, 7, (No. 11), 82-88.